REMARKS

This is a full and timely response to the outstanding final Office Action mailed on July 28, 2003. Reconsideration and allowance of the application and presently pending claims 1-16 are respectfully requested.

Present Status of the Patent Application

Claims 1-16 remain pending in the present application. Claims 1-16 have been rejected. Claim 16 has been amended.

Response To Claim Rejections Under 35 U.S.C. §112

Claims 16 stands rejected under 35 U.S.C. §112(b) as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Applicant has amended claim 16 to replace the term "method" with the term "computer program", as suggested by the Examiner, to overcome this rejection.

Applicant wishes to clarify that the foregoing amendment has been made for purposes of better defining the invention in response to the rejection, and not in response to the rejections made based on prior art. Indeed, Applicant submits that no substantive limitations have been added to the claims. Therefore, no prosecution history estoppel arises from this/these amendment/amendments. Black & Decker, Inc. v. Hoover Service Center, 886 F.2d 1285, 1294 n. 13 (Fed. Cir. 1989); Andrew Corp. v. Gabriel Electronics, Inc., 847 F.2d 819 (Fed. Cir. 1988); Hi-Life Products Inc. v. American National Water-Mattress Corp., 842 F.2d 323, 325 (Fed. Cir. 1988); Mannesmann Demag Corp. v. Engineered Metal Products Co., Inc., 793 F.2d 1279, 1284-1285 (Fed. Cir. 1986); Moeller v. Ionetics, Inc., 794 F.2d 653 (Fed. Cir. 1986).

Response To Claim Rejections Under 35 U.S.C. §103

Claims 1-15 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Houldsworth (U.S. Patent No. 6,526,421) in view of Merchant et al. (U.S. Patent No. 6,163,838). Applicant respectfully traverses this rejection.

"The PTO has the burden under section 103 to establish a prima facie case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so." *ACS Hospital Systems, Inc., v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

"There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination." *In re Oetiker*, 977 F.2d 1443, 1447, 24 USPQ 2d 1443 (Fed. Cir. 1992).

The Applicants contend that no reason, suggestion, or motivation exists for the combination of Houldsworth and Merchants, since Houldsworth relates to instruction level parallelism (the execution of multiple concurrent instructions in a single clock cycle), and Merchant relates to relates to a replay system that creates a slot (clock cycle) for inserting a replayed instruction.

Independent Claim 1

Independent claim 1 is allowable for at least the reason that Houldsworth and Merchant do not disclose, teach, or suggest a "first set of instructions including one or more instructions associated with a correctness check function."

In this regard, and with reference to the teachings of the Houldsworth patent, the Office Action has cited the abstract and Fig. 4, which specifically states:

> A method of scheduling instructions to be executed concurrently by a processor, the processor being capable of executing a predetermined number of instructions concurrently. Instructions from a first process and a second process are interleaved according to a predetermined rule to give a third process. Instructions from the third process are then scheduled for execution at a first time point by the processor. Instructions of the first process generate data structures comprising data objects linked by identifying pointers in a memory heap. The second process comprises a garbage collection process for traversing the memory heap and reclaiming memory allocated to data structures unused by the first process.

As can be verified from a review of this cited portion of Houldsworth, there is no teaching or disclosure of a "first set of instructions including one or more instructions associated with a correctness check function." Houldsworth merely discloses the instructions including garbage collection increments that are "independent of the program instructions" and "parasitically occupy the resources that are unused by the program thread," but does **not**

disclose "a correctness check function." Accordingly, the rejection is deficient in this area. Notwithstanding, the undersigned has reviewed the entirety of the Houldsworth and Merchant patents and has failed to identify any such teaching anywhere within this reference. Accordingly, the Houldsworth and Merchant patents fail to teach, disclose, or suggest the invention as defined by claim 1, and the rejection of claim 1 should be withdrawn.

In addition, independent claim 1 is allowable for at least the reason that Houldsworth and Merchant do not disclose, teach, or suggest a "third logic determining a number of additional instruction slots that may be added to the initial instruction schedule without exceeding a run-time performance cost tolerance level."

In this regard, and with reference to the teachings of the Houldsworth patent, the Office Action has cited col. 6 lines 43-46, which specifically states:

> At the same time it might be possible to gauge the duration of the GC increment to be interleaved to determine whether the interleaving would adversely affect the performance of the program instructions.

As can be verified from a review of this cited portion of Houldsworth, there is no teaching or disclosure of a "first set of instructions including one or more instructions associated with a correctness check function." Houldsworth merely discloses interleaving the GC increments in spare slots and determining the performance based on this interleaving, but does **not** disclose "determining a number of additional instruction slots that may be added to the initial instruction schedule without exceeding a run-time performance cost tolerance level." Furthermore, Merchant merely discloses having the scheduler not schedule an instruction creating a slot for inserting a replayed instruction, but also does **not** disclose "determining a number of additional instruction slots that may be added to the initial instruction schedule without exceeding a run-time performance cost tolerance level." Accordingly, the rejection is deficient in this area. Notwithstanding, the undersigned has reviewed the entirety of the Houldsworth and Merchant patents and has failed to identify any such teaching anywhere within this reference. Accordingly, the Houldsworth and Merchant patents fail to teach, disclose, or suggest the invention as defined by claim 1, and the rejection of claim 1 should be withdrawn.

Independent Claims 8 and 13

Independent claims 8 and 13 are allowable for at least the same reasons as discussed above regarding claim 1

Dependent Claims:

Dependent claims 2-7, 9-12, and 14-16 are believed to be allowable for at least the reason that these claims depend from allowable independent claims 1, 8, and 13, respectively. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

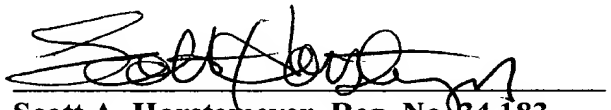
Prior Art Made of Record

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-16 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,



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